

APPEAL BRIEF

I. REAL PARTY IN INTEREST

The real party in interest is Philips Electronics North America Corporation, the assignee of record.

II. RELATED APPEALS AND INTERFERENCES

Appellant is not aware of any pending appeals, judicial proceedings, or interferences which may be related to, directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-26 are rejected.

Claims 27-29 are canceled.

IV. STATUS OF AMENDMENTS

An after-final amendment under 37 CFR 1.116 was not filed in response to the Final Office Action. All amendments prior to the Final Office Action were entered into the record.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention, as recited in independent claim 1, is related to an automated recommendation system (page 1, lines 6–14 of the specification). The system comprises a processor (Fig. 4; reference numeral 240) connected to receive resource data (page 13, lines 21-23) defining available resources (page 12, line 15 – page 13, line 13) and at least two sets of profile data (Figs. 5-7; reference numerals 450, 475, and 490), each defining a user's preferences with respect to the

resources. Each of the sets of profile data is derived from a different class of interaction of the user with a first portion of the resource data and usable to predict a given resource's desirability based on each of the sets (page 16, lines 1-12; page 17, line 22 - page 18, line 13; page 19, line 11 - page 20, line 1). The processor (240) is adapted to generate at least two sets of predictions (Fig. 8; reference numerals 335, 342) based on one or a combination of the sets of profile data (page 20, line 20 - page 21, line 1), and combine the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions (page 21, lines 4-20).

Further, the present invention, as recited in independent claim 9, is directed to a method of recommending resources (page 1, lines 6-14). At least two sets of profile data are generated based on expressed preferences of a user with respect to the resources (Fig. 5, reference numeral 450; Fig. 7, reference numeral 490), each being usable to predict a given resource's desirability based on each of the sets (page 16, lines 1-24; page 19, line 11 - page 20, line 1). At least two sets of predictions (Fig. 8; reference numerals 335, 342) are generated based on one or a combination of the sets of profile data (page 20, line 20 - page 21, line 1). The predictions are combined by weight-averaging corresponding ones from each of the at least two sets of predictions (page 21, lines 4-20).

Still further, the present invention, as recited in independent claim 18, is directed to an automated recommendation system (page 1, lines 6-14). The system comprises a processor (Fig. 4; reference numeral 240) connected to receive resource data defining available resources (page 12, line 15 - page 13, line 23) and sets of profile data, each defining a user's preferences with respect to the resources (Figs. 5-7; reference numerals 450, 475, and 490). The sets of profile data include a set of explicit profile data indicating express indications by a user of preferred classes of programming rather than indications by the user of particular resources that are preferred (page 19, line 11 - page 20, line 1; page 7, line 19). A feedback data set is derived from ratings provided by the user with respect to a particular resource in the resource data (pages 16-17), and an implicit data

set is derived from machine-observation of a user's resource use history, whereby the implicit data reflects the user's selection (page 17, line 22 – page 18, line 13; page 4, line 8). The processor (Fig. 4; reference numeral 240) is adapted to generate at least two sets of predictions (Fig. 8; reference numerals 335, 342) based on one or a combination of the sets of profile data (page 20, line 20 – page 21, line 3), each of the predictions including a confidence level (page 21, lines 4-5). The processor (Fig. 4; reference numeral 240) is further adapted to combine the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions (page 21, lines 4-20).

Still further, the present invention, as recited in independent claim 21, is directed to a method of automatically recommending resources (page 1, lines 6-14). Resource data defining available resources (page 12, line 15 – page 13, line 13) is received along with sets of profile data (reference numerals 450, 475, and 490), each defining user preferences with respect to the resources. The sets of profile data include a set of explicit profile data indicating express indications by a user of preferred classes of programming rather than indications by the user of particular resources that are preferred (page 19, line 11 – page 20, line 1; page 7, line 19). A feedback data set is derived from ratings provided by the user with respect to a particular resource in the resource data (pages 16-17). An implicit data set is derived from machine-observation of a user's resource use history, whereby the implicit data reflects the user's selection (page 17, line 22 – page 18, line 13; page 4, line 8). At least two sets of predictions are generated (reference numerals 335, 342) based on one or a combination of the sets of profile data (page 20, line 20 – page 21, line 3), each of the predictions including a confidence level (page 21, lines 4-5). The predictions are combined by weight-averaging corresponding ones from each of the at least two sets of predictions to produce a combined set (page 21, lines 4-20).

Still further, the present invention, as recited in independent claim 24, is directed to a method of combining profile data. First profile data are generated by receiving through a user interface user

preferences in the form of expressed generalized preferences corresponding classes of resources. Second profile data are generated by receiving user preferences in the form of rating data corresponding to specific resources. The first and second profile data are applied to respective prediction engines to produce first and second prediction results. The first and second results are combined (page 23, line 24 – page 24, line 7).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1) Whether claims 1-6, 9-14 and 17-26 are properly rejected under 35 USC 102(e) as being anticipated by U.S. Patent 6,438,579 (“Hosken”).

2) Whether claims 7, 8, 15 and 16 are properly rejected under 35 USC 103(a) as being unpatentable over Hosken in view of U.S. Patent 6,112,186 (Bergh).

VII. ARGUMENT

1) Claims 1-6, 9-14 and 17-26 are not properly rejected under 35 USC 102(e) as being anticipated Hosken.

With reference to Appellant’s claim 1, it is respectfully submitted that Hosken fails to teach several elements of the present invention.

Hosken does not teach creating two sets of predictions from profiles based on [a] user’s preferences and combining these sets of predictions. It is asserted in the Final Office Action that Hosken’s two profiles, based on the implicit and explicit data associated with the user, correspond to Appellant’s claimed two sets of profiles. Consequently, Appellant respectfully maintains that Hosken does not teach determining two sets of predictions from these two profiles, as recited in claim 1. Hosken specifically teaches determining a single set of predictions (see Recommended Set 72, in FIG. 2 of the patent) based on the user’s implicit and explicit behaviors.

Furthermore, according to the Final Office Action Hosken teaches combining two sets of predictions, as alleged at column 16, lines 23-38. Appellant respectfully notes that the two sets of the combined predictions in Hosken are not the two sets of predictions based on the user's profiles, as recited in Appellant's claim 1. As taught by Hosken, the two sets of predictions include the 'content-related' predictions based on the user's preferences, and the 'collaborative filtering generated' predictions based on other user's preferences.

It is stated in MPEP Section 2131:

"A claim is anticipated only if *each and every element* as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The *identical invention* must be shown in as *complete detail* as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

As discussed above, Hosken fails to teach every element of Appellant's claim 1. Appellant, therefore, respectfully submits the final rejection of claim 1 lacks factual and legal basis and should be reversed, per MPEP Section 2131. Claim 1 should be passed to issue.

Independent claims 9, 18, 21 and 24 contain, among other things, features that are discussed above with reference to claim 1. Appellant essentially repeats the same argument as above with reference to claim 1 and asserts that claims 9, 18, 21 and 24 are not anticipated by the prior art of record for the same reasons as claim 1. Appellant, therefore, respectfully submits that the final rejection of claims 9, 18, 21 and 24 lacks factual and legal basis and should be reversed. Claims 9, 18, 21 and 24 should be passed to issue.

Claims 2 – 6, 10 – 14, 17, 19, 20, 22, 23, 25 and 26 depend, either directly or indirectly, from independent claims 1, 9, 18, 21 and 24 and thus incorporate novel and non-obvious features thereof, in addition to further limitations. Therefore, dependent claims 2 – 6, 10 – 14, 17, 19, 20, 22, 23, 25 and 26 are patentably distinguishable over the prior art of record for at least the same reasons as

independent claims. Appellant, therefore, respectfully submits the final rejection of claims 2 – 6, 10 – 14, 17, 19, 20, 22, 23, 25 and 26 lacks factual and legal basis and should be reversed. Claims 2 – 6, 10 – 14, 17, 19, 20, 22, 23, 25 and 26 should be passed to issue.

2) Claims 7, 8, 15 and 16 are not properly rejected under 35 USC 103(a) as being unpatentable over Hosken in view of Bergh.

Claims 7, 8, 15 and 16 are dependent from claims 1 and 9, and thus incorporate novel and non-obvious features thereof, in addition to further limitations.

It is stated in MPEP Section 2142:

"To establish a *prima facie* case of obviousness ... the prior art reference (or references when combined) *must teach or suggest all the claim limitations*." ... If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness."


Bergh is not relied upon in the Final Office Action to cure the deficiencies in Hosken, as pointed out above with reference to claim 1. Claims 7, 8, 15 and 16 are patentably distinguishable over the prior art of record. Appellant, therefore, respectfully submits the final

rejection of claims 7, 8, 15 and 16 lacks factual and legal basis and should be reversed. Claims 7, 8, 15 and 16 should be passed to issue.

VIII. CONCLUSION

In light of the above, Appellant respectfully submits that the rejection of claims 1-26 is in error. The prior art references relied upon in the Final Office Action do not anticipate or render obvious Appellant's claims 1-26. Thus, Appellant respectfully submits that the anticipation and obviousness rejections are in error, legally and factually, and must be reversed.

Respectfully submitted,

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IX. CLAIMS APPENDIX

1. An automated recommendation system, comprising
 - a processor connected to receive resource data defining available resources and at least two sets of profile data, each defining a user's preferences with respect to the resources;
 - each of the sets of profile data being derived from a different class of interaction of the user with a first portion of the resource data and usable to predict a given resource's desirability based on each of the sets;
 - the processor being adapted to:
 - generate at least two sets of predictions based on one or a combination of the sets of profile data, and
 - combine the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions.
2. A system as in claim 1, wherein the processor is further adapted to:
 - generate a weighted sum of corresponding records from each of the sets of profile data to generate a single combined set of profile data, and
 - generate at least one of the sets of predictions from the single combined set.
3. A system as in claim 2, wherein the processor is connected to control a delivery of resources corresponding to the resource data and responsively to the predictions.
4. A system as in claim 1, wherein the processor is connected to control a delivery of resources corresponding to the resource data and responsively to the predictions.
5. A system as in claim 1, wherein the at least two profile data sets include a feedback data set derived from ratings provided by the user with respect to a particular resource in the resource data.

6. A system as in claim 1, wherein the at least two profile data sets include an implicit data set derived from machine-observation of a user's resource use history, whereby the implicit data reflects the user's selections of resources to use.
7. A system as in claim 1, wherein at least one set of the at least two profile data sets comprises input vectors, and the input vectors each include feature-value pairs.
8. A system as in claim 1, wherein at least one set of the at least two profile data sets comprises input vectors, and the input vectors include feature-value pairs and a rating value.
9. A method of recommending resources, comprising:
 - generating at least two sets of profile data based on expressed preferences of a user with respect to the resources, each being usable to predict a given resource's desirability based on each of the sets;
 - generating at least two sets of predictions based on one or a combination of the sets of profile data; and
 - combining the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions.
10. A method as in claim 9, further comprising:
 - generating a weighted sum of corresponding records from each of the sets of profile data to generate a single combined set of profile data; and
 - generating at least one of the sets of predictions from the single combined set.
11. A method as in claim 10, further comprising controlling a delivery of resources corresponding to the resource data responsively to the predictions.
12. A method as in claim 9, further comprising controlling a delivery of resources corresponding to the resource data responsively to the predictions.

13. A method as in claim 9, wherein generating the at least two sets of profile data includes generating a feedback data set by accepting ratings from the user with respect to a particular resource in the resource data.

14. A method as in claim 9, wherein generating the at least two sets of profile data includes generating an implicit data set by observing the user's resource use history, whereby the implicit data reflects the user's selections of resources to use.

15. A method as in claim 9, wherein at least one set of the at least two sets of profile data comprises input vectors, and the input vectors each include feature-value pairs.

16. A method as in claim 9, wherein at least one set of the at least two sets of profile data comprises input vectors, and generating the at least two sets of profile data includes generating feature-value pairs and a rating value.

17. A method as in claim 9, wherein: the sets of profile data includes:

- a set of explicit profile data indicating express indications by a user of preferred classes of programming rather than indications by the user of particular resources that are preferred;

- a feedback data set derived from ratings provided by the user with respect to a particular resource in the resource data; and

- an implicit data set derived from machine-observation of a user's resource use history, whereby the implicit data reflects the user's selection.

18. An automated recommendation system, comprising

- a processor connected to receive resource data defining available resources and sets of profile data, each defining a user's preferences with respect to the resources;

- the sets of profile data including:

- a set of explicit profile data indicating express indications by a user of preferred classes of programming rather than indications by the user of particular resources that are preferred;

feedback data set derived from ratings provided by the user with respect to a particular resource in the resource data; and

an implicit data set derived from machine-observation of a user's resource use history, whereby the implicit data reflects the user's selection;

the processor being adapted to generate at least two sets of predictions based on one or a combination of the sets of profile data, each of the predictions including a confidence level;

the processor being further adapted to combine the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions.

19. A system as in claim 18, wherein the processor is further adapted to adjust weights of the weight averaging responsively to a difference between the corresponding ones.

20. A system as in claim 18, wherein the processor is further adapted to selectively override the weight averaging responsively to a difference between the corresponding ones.

21. A method of automatically recommending resources, comprising

receiving resource data defining available resources and sets of profile data, each defining user preferences with respect to the resources; the sets of profile data including:

a set of explicit profile data indicating express indications by a user of preferred classes of programming rather than indications by the user of particular resources that are preferred;

a feedback data set derived from ratings provided by the user with respect to a particular resource in the resource data; and

an implicit data set derived from machine-observation of a user's resource use history, whereby the implicit data reflects the user's selection;

generating at least two sets of predictions based on one or a combination of the sets of profile data, each of the predictions including a confidence level; and

combining the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions to produce a combined set.

22. A method in claim 21, wherein combining the predictions includes adjusting weights of the weight averaging responsively to a difference between the corresponding ones.

23. A method as in claim 21, wherein combining the predictions includes selectively overriding the weight averaging responsively to a difference between the corresponding ones such that a prediction of a one of the sets of predictions is included in the combined set and a prediction of the other of the sets of predictions is excluded.

24. A method of combining profile data, comprising:

generating first profile data by receiving through a user interface user preferences in the form of expressed generalized preferences corresponding classes of resources;

generating second profile data by receiving user preferences in the form of rating data corresponding to specific resources; and

applying the first and second profile data to respective prediction engines to produce first and second prediction results and combining the first and second results.

25. A method as in claim 24, further including combining the first and second profile data, wherein combining the first and second profiles includes weight averaging corresponding ones of the profile data.

26. A method as in claim 24, wherein combining respective results includes selectively weight averaging corresponding ones of the predictions.

X. EVIDENCE APPENDIX

None.

XI. RELATED PROCEEDINGS APPENDIX

None.